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APPLICATION NUMBER: 60/485,749

FILING DATE: July 10, 2003

RELATED PCT APPLICATION NUMBER: PCT/US04/21827

Certified by



Jon W Dudas



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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 C.F.R. § 1.53 (c).

Filing Date		July 10, 2003		Docket No.		0671-0106P	
INVENTOR(s)/APPLICANT(s)							
Given Name (first and middle (if any))		Last Name		RESIDENCE (CITY AND EITHER STATE OR FOREIGN COUNTRY)			
James Vanerd		WICKLUND, Jr.		Mililani, Hawaii - United States Citizen			
<input type="checkbox"/> Additional inventors are being named on the separately numbered sheets attached hereto							
TITLE OF THE INVENTION (280 characters max)							
CLAMPING PLIERS							
CORRESPONDENCE ADDRESS							
Birch, Stewart, Kolasch & Birch, LLP or Customer No. 2292 P.O. Box 747 Falls Church							
STATE		VA		ZIP CODE		22040-0747	
				COUNTRY		U.S.A.	
ENCLOSED APPLICATION PARTS (check all that apply)							
<input checked="" type="checkbox"/> Specification		Number of Pages: 8		<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76.			
<input checked="" type="checkbox"/> Drawing(s)		Number of Sheets: 8		<input type="checkbox"/> Other (specify):			
METHOD OF PAYMENT (check one)						PROVISIONAL FILING FEE	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. <input checked="" type="checkbox"/> A check or money order is enclosed to cover the Provisional filing fees. <input type="checkbox"/> The Commissioner is hereby authorized to charge filing fees and credit Deposit Account Number 02-2448, if necessary.						<input checked="" type="checkbox"/> Small Entity (\$80.00) <input type="checkbox"/> Large Entity (\$160.00)	

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

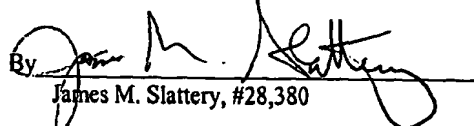
☒ No.

☐ Yes, the name of the U.S. Government agency and the Government contract number are:

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

Date: July 10, 2003

By 
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JMS/mlr
0671-0106P

CLAMPING PLIERS

BACKGROUND OF THE INVENTION

Field of the Invention

[001] A locking pliers for use with a power tool wherein a housing is mounted on a power tool and locking pliers are rotatably mounted relative to the power tool to permit an article retained by the locking pliers to be brought into engagement with the power tool.

Description of Background Art

[002] Heretofore, when an individual utilized a power tool it was necessary to use one hand to actuate and control the operation of the power tool while using the other hand to hold an article to be brought into engagement with the power tool. For example, if an individual desired to cut an article such as a pipe, angle iron, cable or wire, it was necessary to hold the cutting tool in one hand and then bring the article into engagement with the cutting tool with the other hand. Depending on the size, length or orientation of article, it was difficult to accurately cut the article.

[003] As a solution to this problem, it is possible to place the article in a vise and then the individual would have two hands to operate the cutting tool and the locking plier to cut the article. One hand will be on the locking plier and the other hand will be on the power tool. However, when an individual is working in the field, it is not always possible to have a vise handy to permit the article to be placed in the vise.

SUMMARY AND OBJECTS OF THE INVENTION

[004] The present invention solves the problems with regard to the operation of a power tool by permitting an individual to hold an article in a locking pliers that is mounted for rotation relative to the power tool.

[005] The present invention permits an individual to use two hands to control the operation of the power tool and the locking plier.

[006] The present invention permits an individual to accurately work on an article to cut a "square" cut when the individual is dispatched to the field.

[007] These and other objects of the present invention are achieved by providing a locking pliers for use with a power tool that include a housing mounted on a power tool. The housing includes at least one engaging portion. A locking pliers is provided having a retaining section with a proximal end and a distal end. The proximal end is mounted on at least one engaging portion to retain the locking pliers in a rotatable relationship relative to the housing. An engaging section of the pliers is mounted in a movable relationship relative to the retaining section and is selectively locked relative to the distal end of the retaining section for positioning an article therebetween. When an article is locked relative to the distal end of the retaining section and the engaging section of the locking pliers, the proximal end of the retaining section can be rotated relative to the housing to permit the power tool to come into engagement with an article.

[008] Further scope of applicability of the present invention will become apparent from the detailed description given hereinafter. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

[009] The present invention will become more fully understood from the detailed description given hereinbelow and the accompanying drawings which are given by way of illustration only, and thus are not limitative of the present invention, and wherein:

[0010] Figure 1 is a perspective view illustrating a housing mounted on a power tool with a locking pliers rotatably mounted relative to the housing for accurately bringing an article into engagement with the power tool;

[0011] Figure 2 is a view illustrating the locking pliers disengaged relative to the housing and illustrating an article being locked relative to a distal end of a retaining section and an engaging section of the locking pliers;

[0012] Figure 3 is a perspective view illustrating the housing mounted on the power tool with the locking pliers positioning an article that may be brought into engagement with the power tool;

[0013] Figure 4 is a top view illustrating the housing mounted on the power tool with the locking pliers positioning an article that may be brought into engagement with the power tool;

[0014] Figure 5 is a side view illustrating the housing mounted on the power tool with the locking pliers positioning an article that may be brought into engagement with the power tool;

[0015] Figure 6 is a side view illustrating the housing mounted on the power tool with the locking pliers positioning an article that may be brought into engagement with the power tool;

[0016] Figure 7 is a top view illustrating the housing mounted on the power tool with the locking pliers being disengaged therefrom and positioning an article that may be brought into engagement with the power tool;

[0017] Figure 8 is a side view illustrating the housing mounted on the power tool with the locking pliers positioning an article that may be brought into engagement with the power tool;

[0018] Figure 9 is a side view illustrating the housing mounted on the power tool with the locking pliers positioned adjacent thereto and a plurality of articles that may be brought into engagement with the power tool being illustrated adjacent to the power tool;

[0019] Figure 10 is an exploded view illustrating the various components of the locking pliers;

[0020] Figure 11 is a top view illustrating the housing mounted on the power tool and a side view of the locking pliers being disposed in a disconnected position adjacent thereto;

[0021] Figure 12 is a side view illustrating the housing disengaged from the power tool and a side view of the locking pliers being disposed in a connected position relative to the housing;

[0022] Figure 13 is a side view illustrating the housing disengaged from the power tool and a side view of the locking pliers being disposed in a disconnected position relative to the housing;

[0023] Figure 14 is a top view illustrating the housing mounted on the power tool with an article locking pliers being engaged relative thereto and positioning an article that may be brought into engagement with the power tool;

[0024] Figure 15 is a perspective view illustrating the housing mounted on the power tool with an article locking pliers being engaged relative thereto and positioning an article that may be brought into engagement with the power tool; and

[0025] Figure 16 is a top view illustrating the housing mounted on the power tool with an article locking pliers being engaged relative thereto and positioning an article that may be brought into engagement with the power tool.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0026] As illustrated in Figures 1-16, a locking pliers 20 is illustrated for use with a power tool 12 together from a power tool attachment 10. A housing 14 is mounted on the power tool 12. The 14 housing includes at least one engaging portion 16 that may be in the form of a pin with two flat surfaces. A locking pliers 20 is provided

having a retaining section 22 with a proximal end 24 and a distal end 26. The proximal end 24 is mounted on at least one engaging portion 16 to retain the locking pliers 20 in a movable relationship relative to the housing 14.

[0027] An engaging section 32 of the locking pliers 20 is mounted in a movable relationship relative to the retaining section 22 and is selectively locked relative to the distal end 26 of the retaining section 22 for positioning an article 40A-40D therebetween. When an article 40A-40D is locked relative to the distal end 26 of the retaining section 22 and the engaging section 32 of the locking pliers 20, the proximal end 24 of the retaining section 22 can be rotated relative to the housing 14 to permit the power tool 12 to come into engagement with the article 40A-40B.

[0028] As illustrated in the Figures with particular reference to Figures 9-12, the locking pliers 20 includes an actuating handle 28 that includes an aperture 28A that is pivotally connected to an aperture 25 in the retaining section 22. A gripping handle 29 is formed to include the engaging section 32. The engaging section 32 may be of any desired shape to accommodate an article 40A-40D that is designed to be received between the engaging section 32 and the distal end 26 of the retaining section 22. The gripping handle 29 includes an aperture 29A formed therein. The retaining section 22 includes a second aperture 27 that is pivotally connected to the aperture 29A in the gripping handle 29.

[0029] The proximal end 24 of the retaining section 22 includes a C-shaped opening that is designed to be received within a slot or engaging portion 16 of the housing 14. The retaining section 22 is designed to permit the locking pliers 20 to be rotated relative to the housing 14 to permit an article 40A-40D to come into engagement with the power tool 12. Thus, the power tool attachment 10 can cut an "accurate" cut to specific angle and can cut a "square" or 90° cut. Note, pin (end of 16) must be positioned 90° relative to cutting disc for 90° cut.

[0030] The engaging porting 16 is designed to fit relative to the proximal end 24 of the retaining section 22 by aligning the proximal end 24 with a pin that includes two flat surfaces on the engaging portion 16. When the proximal end 24 and the flat surfaces are aligned the locking pliers 20 can be connected to the housing 14. When

the proximal end 24 is not aligned with the flat surfaces on the engaging portion 16, the locking pliers 20 can be rotated without being disengaged from the housing 14.

[0031] In the particular embodiment illustrated in the drawings, the power tool 12 is a cutting saw and the locking pliers 20 enables an individual to use the cutting saw to accurately cut an article 40A-40D.

[0032] The present invention permits an individual to easily operate a power tool while holding an article in a locking pliers that is mounted for rotation relative to the power tool. Thus, an individual can use two hands to control the operation of the power tool and the locking pliers. Further, an individual may perform accurate work on an article when the individual is working in the field without the need to use a vise.

[0033] The invention being thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention, and all such modifications as would be obvious to one skilled in the art are intended to be included within the scope of the following claims.

WHAT IS CLAIMED IS:

1. A locking pliers for use with a power tool comprising:
 - a housing adapted to be mounted on a power tool, said housing including at least one engaging portion;
 - a locking pliers having a retaining section with a proximal end and a distal end, said proximal end being adapted to mounted on at least one engaging portion to retain the locking pliers in a movable relationship relative to the housing; and
 - an engaging section of said locking pliers being mounted in a movable relationship relative to the retaining section and being selectively locked relative to the distal end of the retaining section for positioning an article therebetween;wherein when an article is locked relative to the distal end of the retaining section and the engaging section of the locking pliers, the proximal end of said retaining section can be rotated relative to the housing to permit a power tool to come into engagement with an article.
2. The locking pliers according to claim 1, and further including a cylindrical pin with a flat side positioned at a 90° angle to a cutting edge of power tool at an angel that prevents disengagement of locking plier during cutting operation.

ABSTRACT OF THE DISCLOSURE

A locking pliers for use with a power tool includes a housing mounted on a power tool. The housing includes at least one engaging portion. A locking pliers is provided having a retaining section with a proximal end and a distal end. The proximal end is mounted on the at least one engaging portion for retain the locking pliers in a rotational relationship relative to the housing. An engaging section of the locking pliers is mounted in a movable relationship relative to the retaining section and is selectively locked relative to the distal end of the retaining section for positioning an article therebetween. When an article is locked relative to the distal end of the retaining section and the engaging section of the locking pliers, the proximal end of the retaining section can be rotated relative to the housing to permit the power tool to come into engagement with an article.

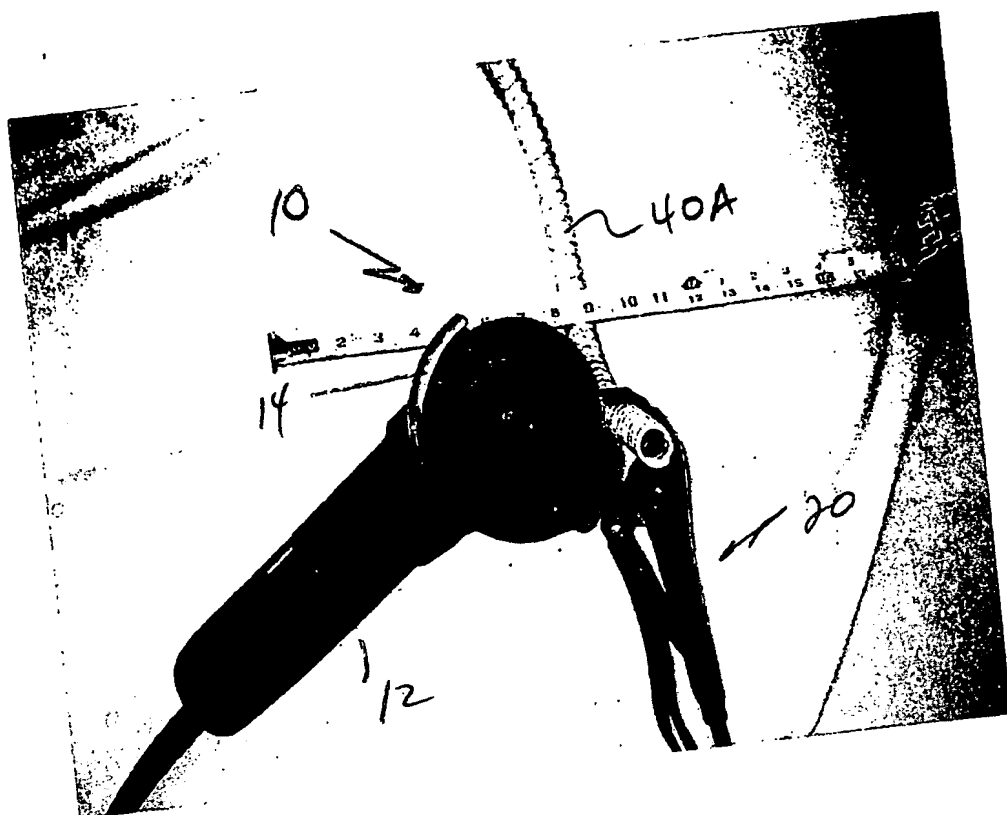


FIG. 1

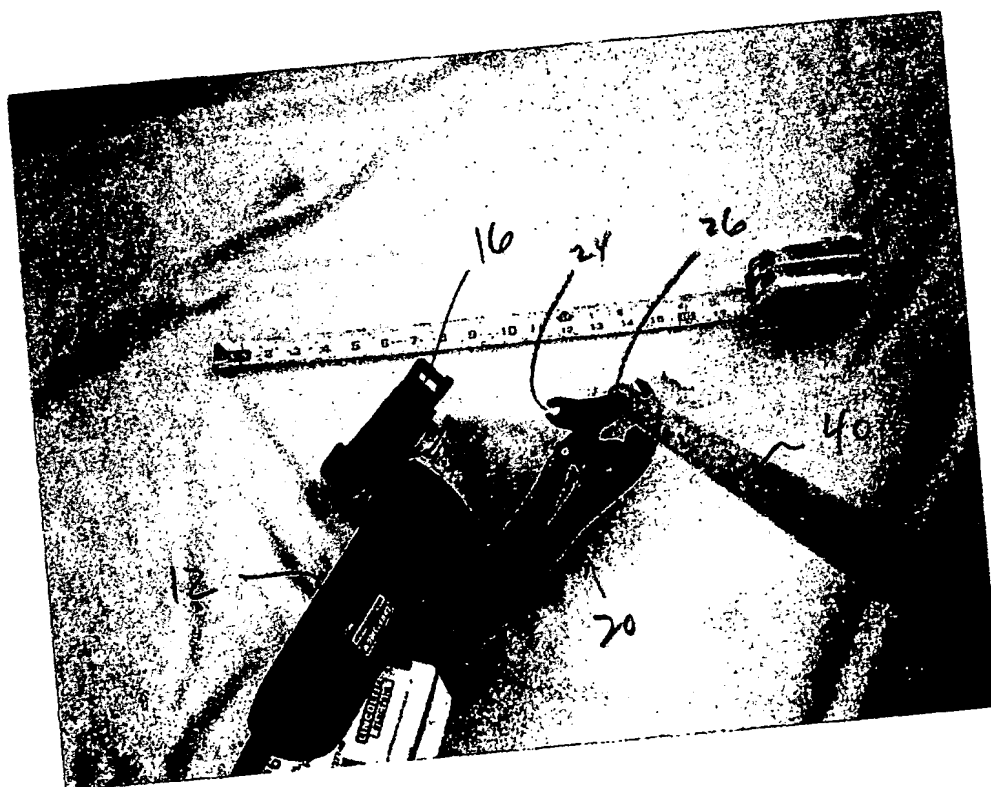


FIG. 2

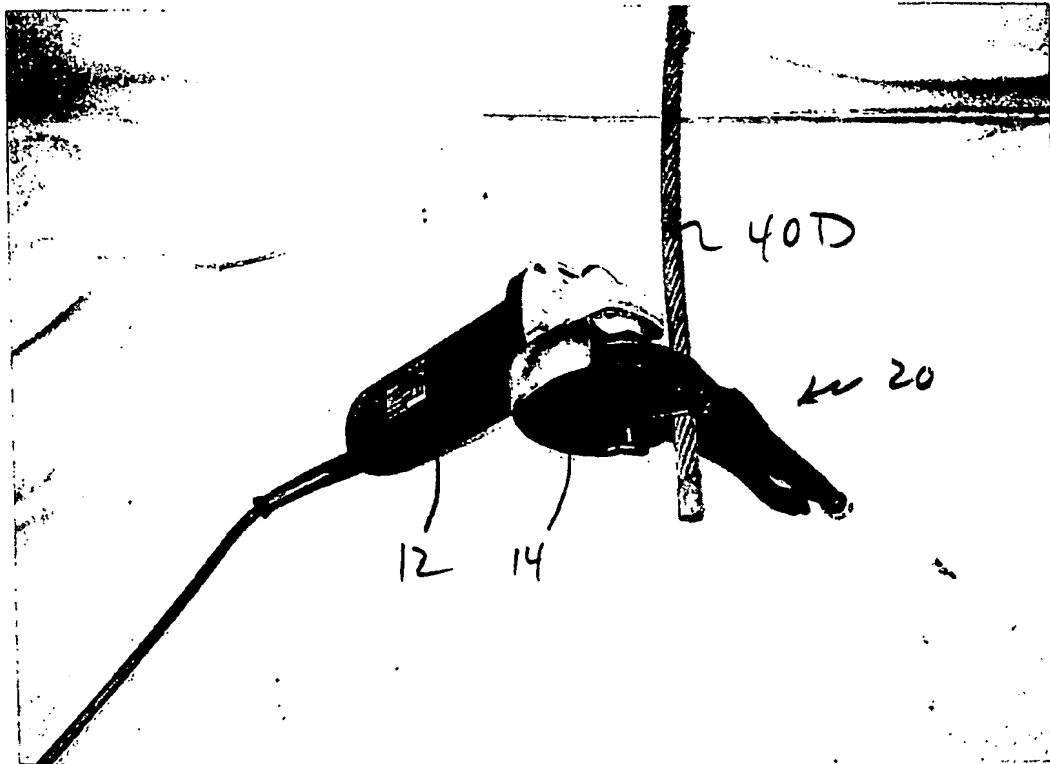


FIG. 3

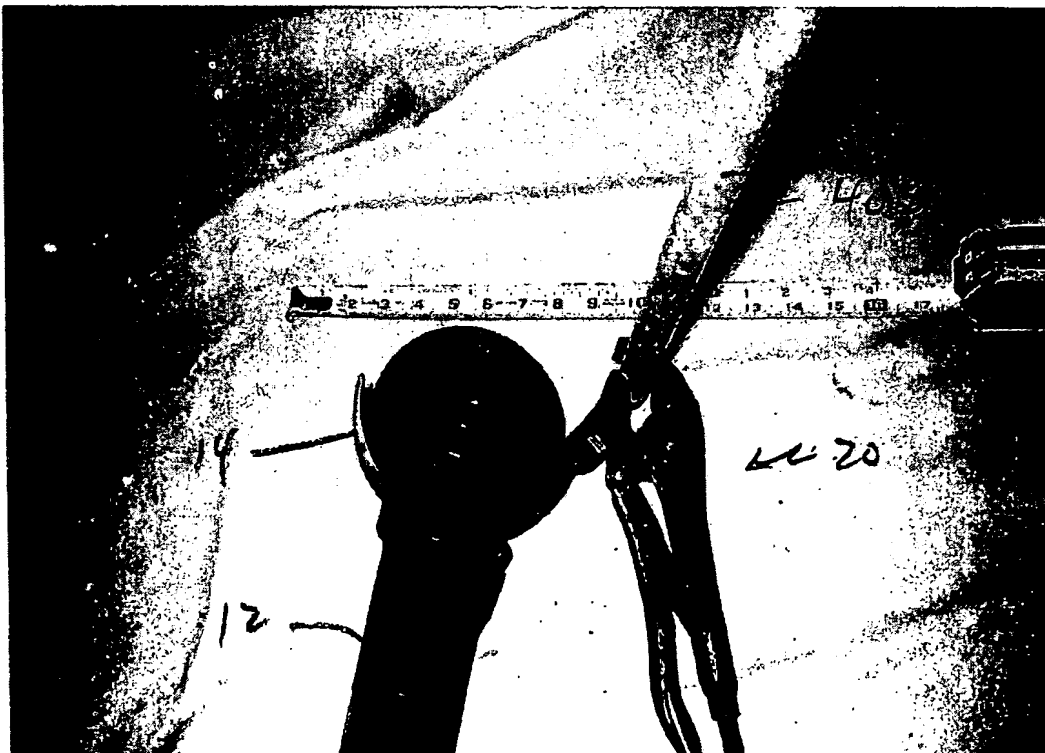


FIG. 4

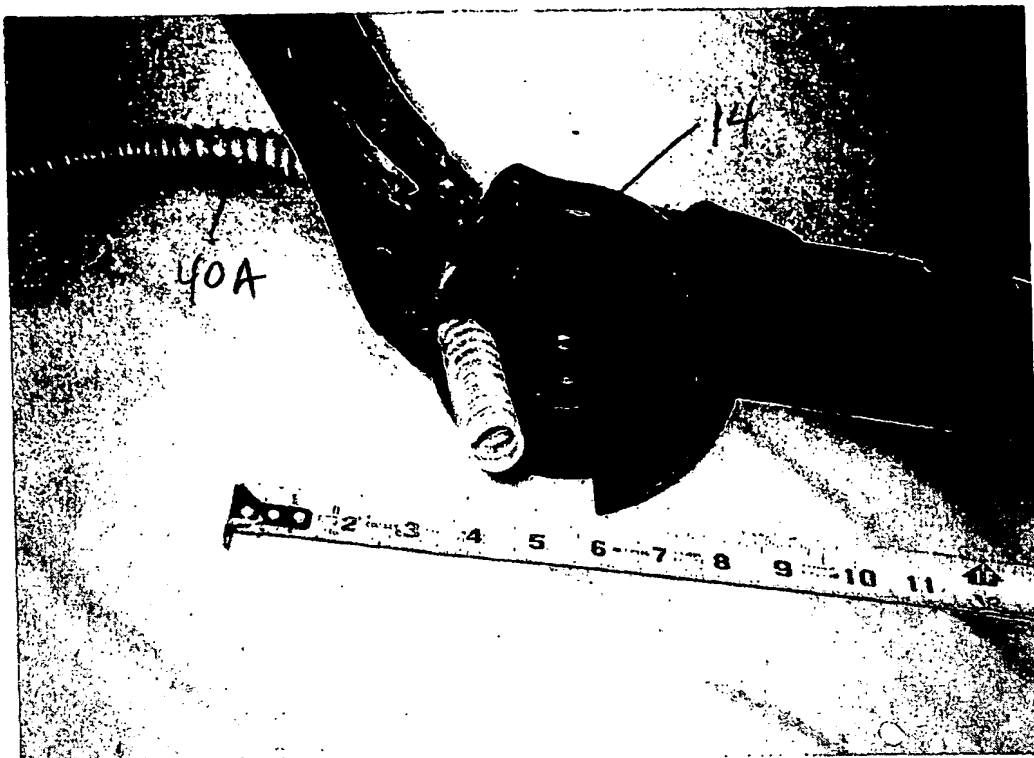


FIG. 5



FIG. 6



FIG. 7

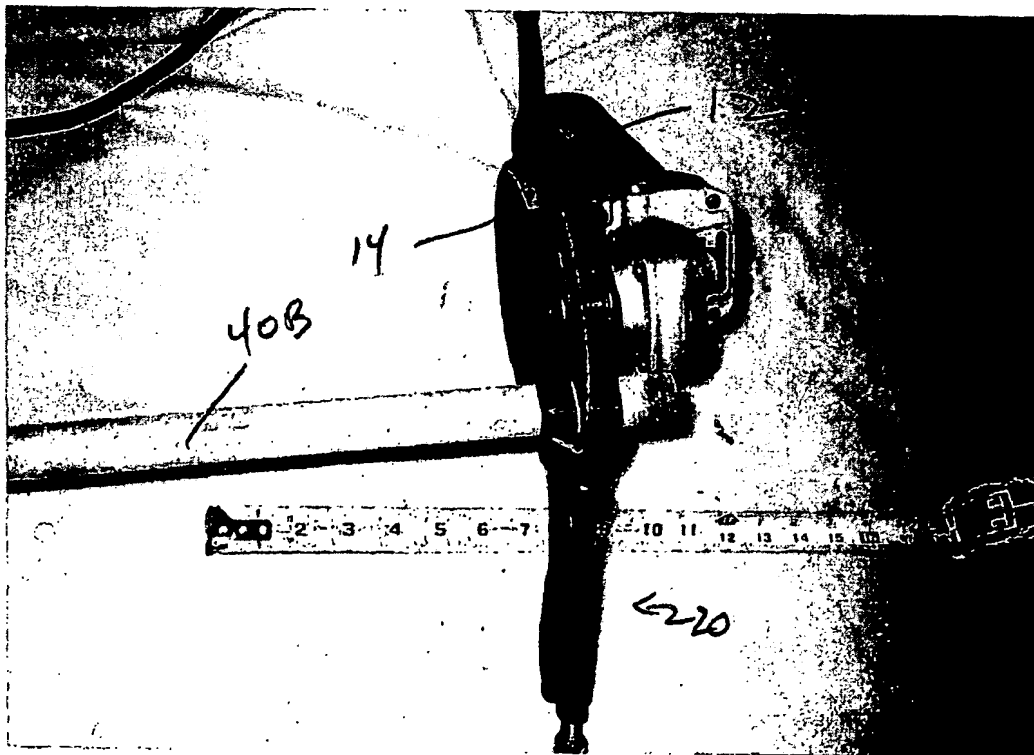


FIG. 8

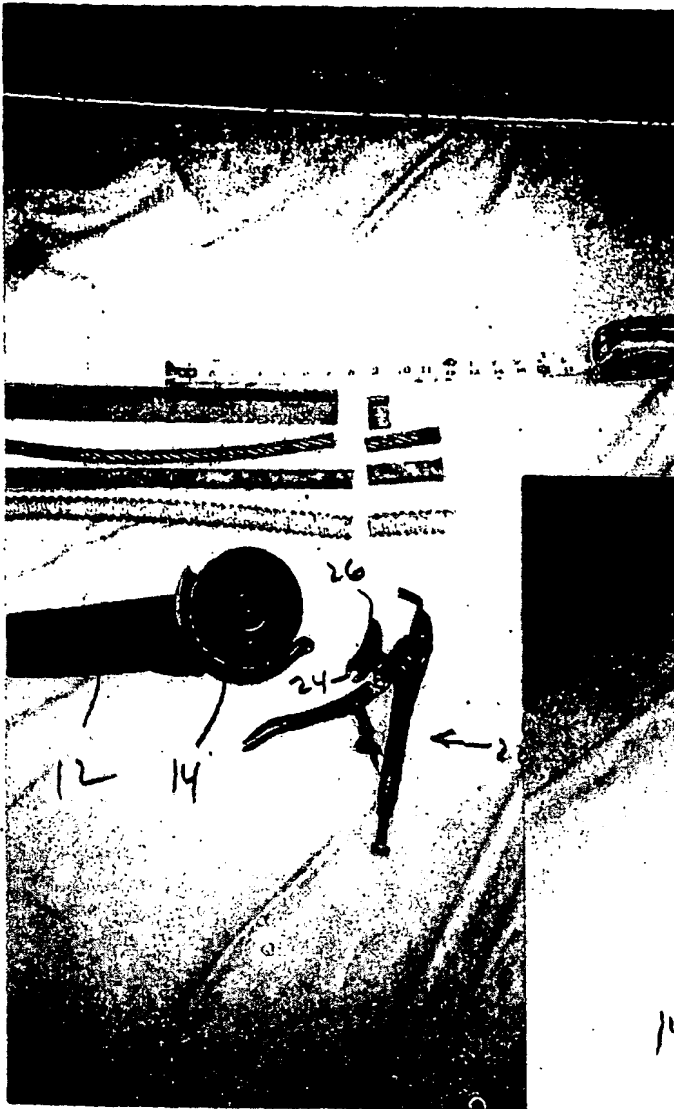


FIG. 9

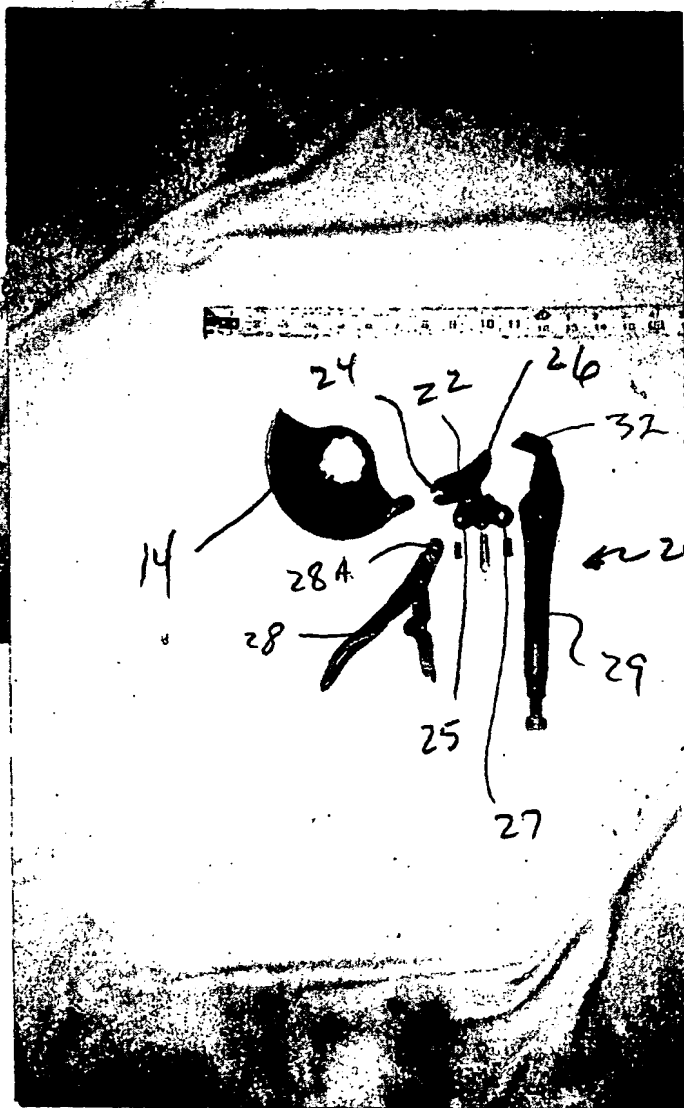


FIG. 10



FIG. 11

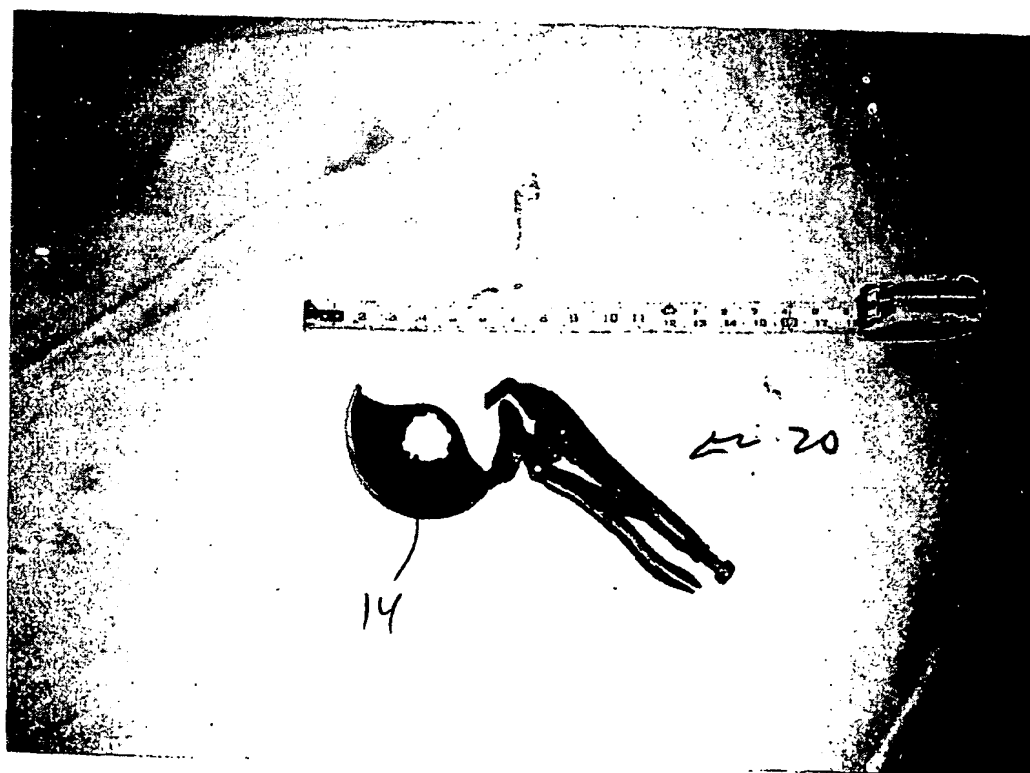


FIG. 12

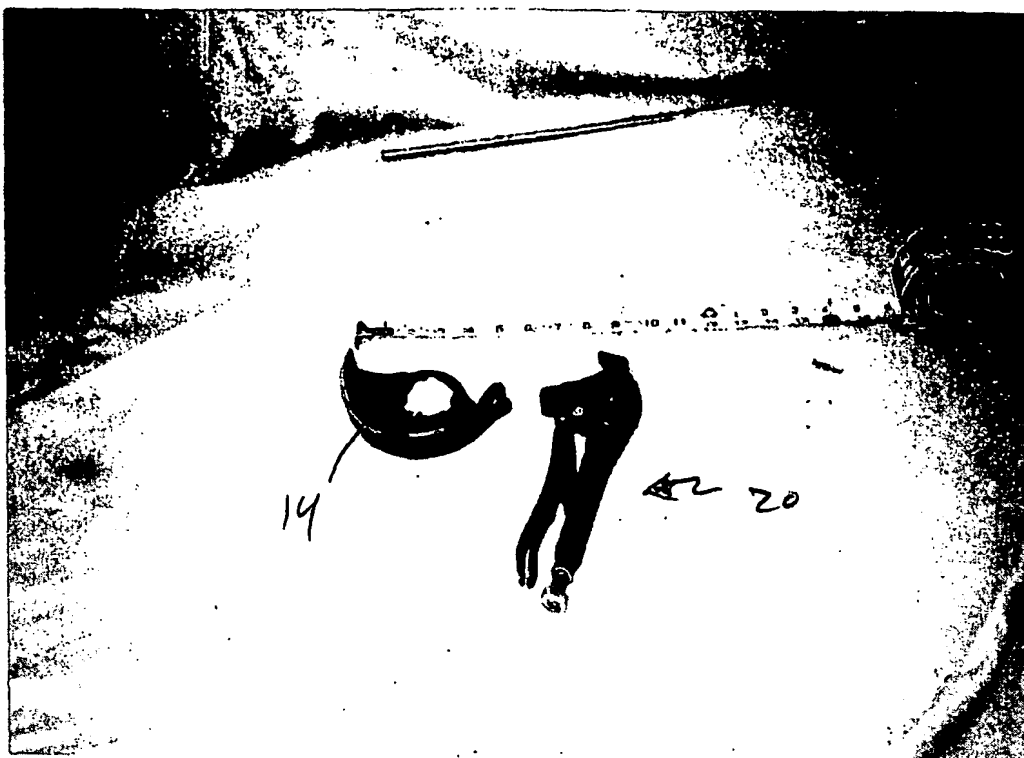


FIG. 13

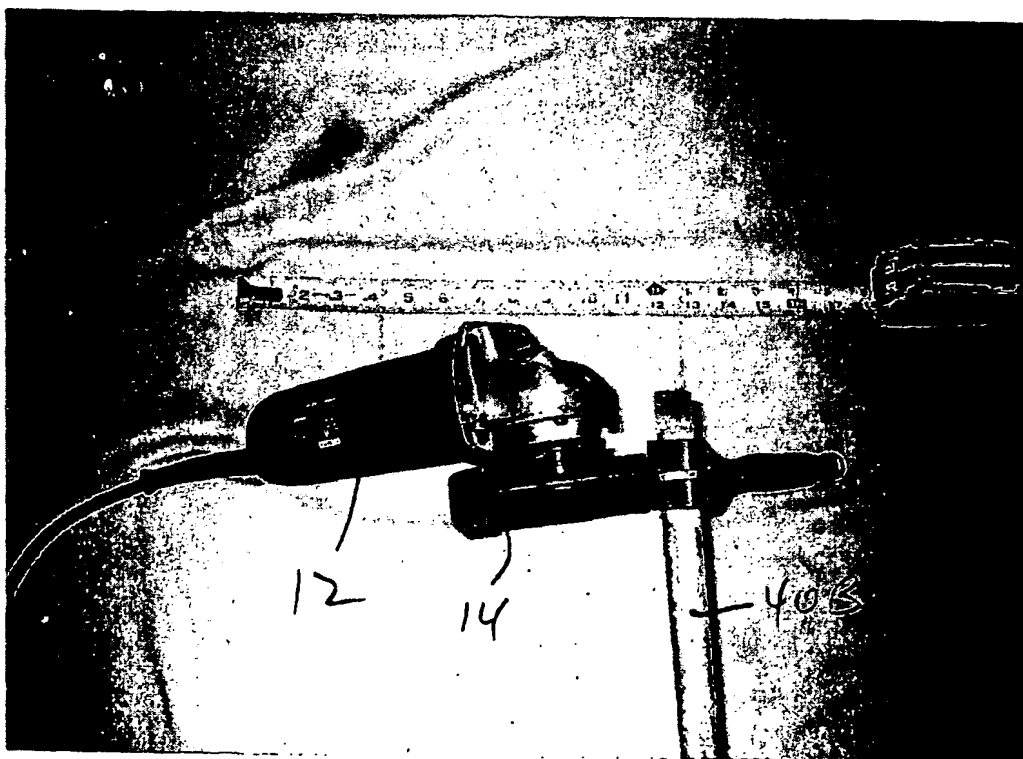


FIG. 14

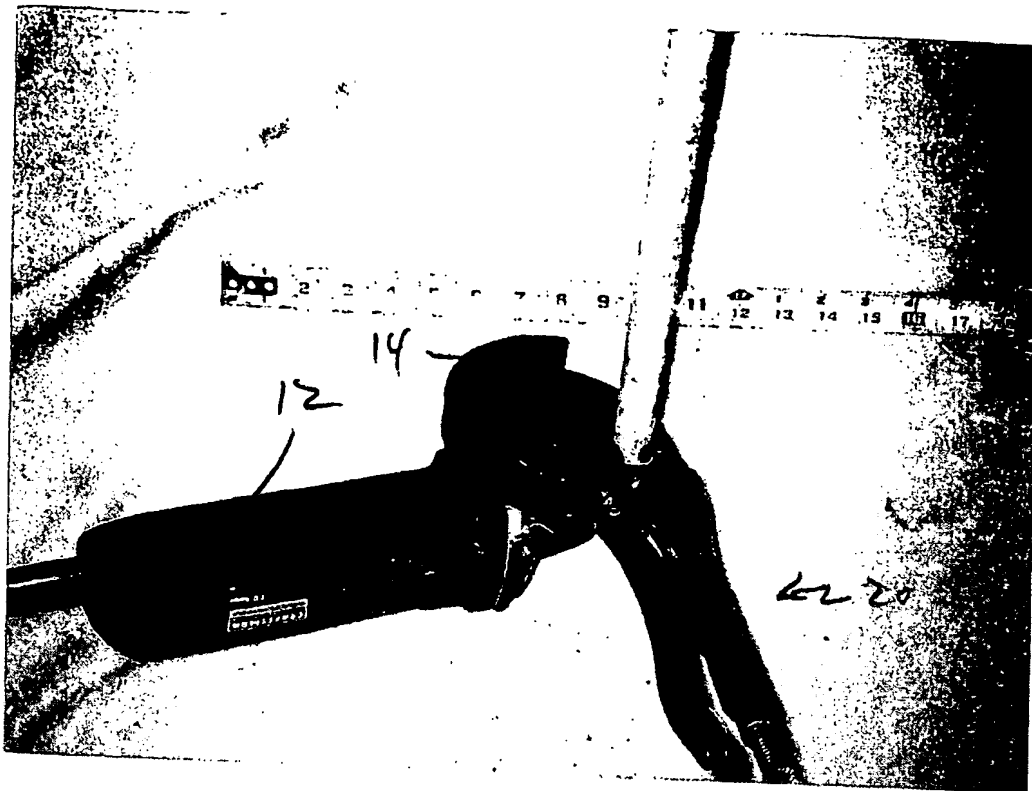


FIG. 15

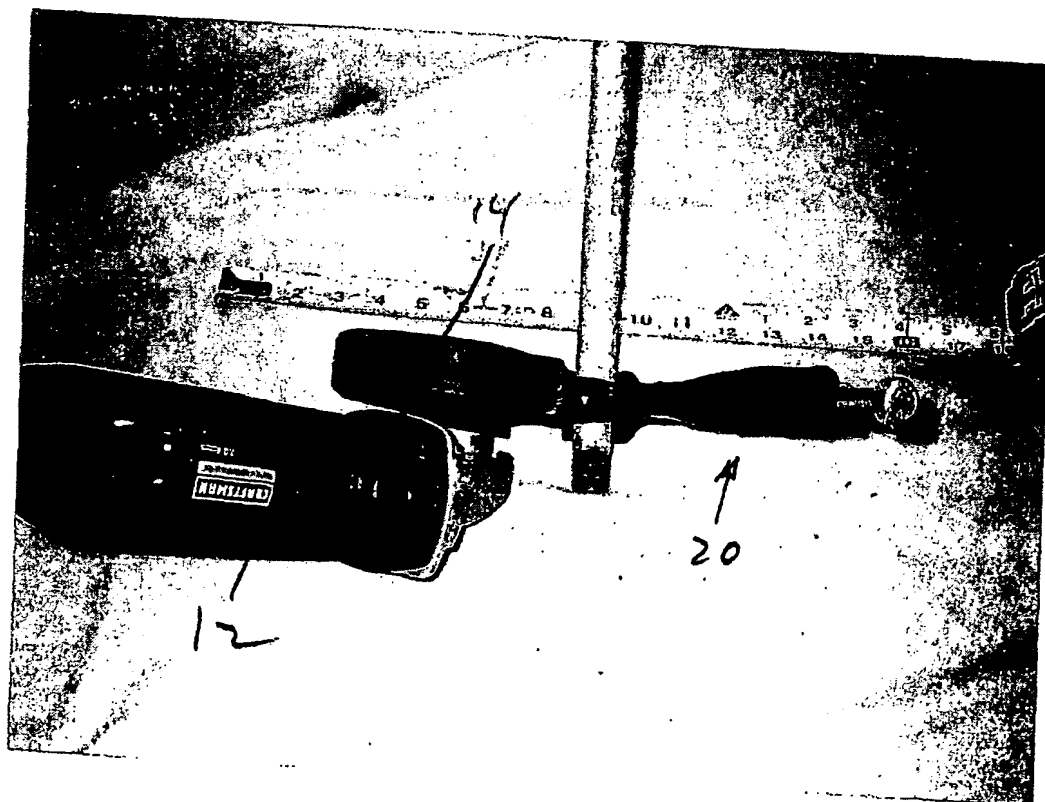


FIG. 16

Document made available under the Patent Cooperation Treaty (PCT)

International application number: PCT/US04/021827

International filing date: 09 July 2004 (09.07.2004)

Document type: Certified copy of priority document

Document details: Country/Office: US
Number: 60/485,749
Filing date: 10 July 2003 (10.07.2003)

Date of receipt at the International Bureau: 06 September 2004 (06.09.2004)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)



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